

THE PORT AUTHORITY
OF NY & NJ

ENGINEERING PROGRAM MANAGER
WORLD TRADE
CENTER
CHIEF ELECTRICAL ENGINEER

1 8/23/99 AS-BID
No. Date Revision Approved

ENGINEERING DEPARTMENT
DESIGN DIVISION

WORLD
TRADE
CENTER

ELECTRICAL

Title
FIRE ALARM SYSTEM
DEVICE UPGRADE
PHASE III
1 WORLD TRADE CENTER
CONTRACT NO. 3
77th FLOOR
SPEAKER
INSTALLATION AND
REMOVAL PLAN

This drawing subject to conditions in Contract. All
inventions, ideas, designs and methods herein are
reserved to Port Authority and may not be used
without its written consent.

S. FELDSTEIN R. DUKESHIRE A.S.
Designed by Drawn by Checked by

AUGUST 9, 1999
Date

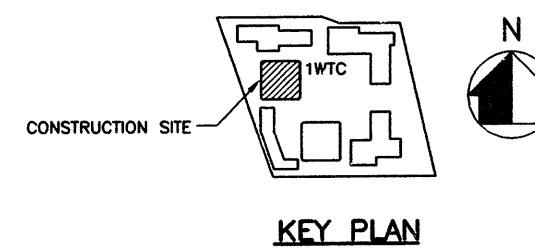
WTC-861.176 E-077-2
Contract Number Drawing Number

NOTES:

1. FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES, SEE DWG. E-1.
FOR INSTALLATION DETAILS, SEE DWG. E-2. FOR WIRING DIAGRAMS,
SEE DWG. E-3.
2. DISCONNECTION OF EXISTING SPEAKER CIRCUIT AND CONNECTION
OF INSTALLED SPEAKER CIRCUIT AT THE TSC AND/OR THE EXISTING
SPEAKER SHALL BE MADE AFTER INSTALLED SPEAKER WIRING IS TESTED
AND OPERATIONAL. THIS WORK SHALL BE DONE IN THE PRESENCE
OF THE ENGINEER.
3. DISCONNECTION AND REMOVAL OF EXISTING TENANT AMPLIFIER AND
ASSOCIATED CONDUIT AND WIRING UP TO THIS SPEAKER SHALL BE MADE
AFTER INSTALLED SPEAKERS ARE TESTED AND OPERATIONAL. THIS WORK
SHALL BE DONE IN THE PRESENCE OF THE ENGINEER.
4. CONTRACTOR SHALL REMOVE EXISTING SPEAKERS ONLY AFTER INSTALLED
DEVICES ARE OPERATIONAL.
5. FOR REMOVAL AND PATCHING PLAN DETAILS (P-1, P-2, P-3 & P-4),
SEE DWG. A-1.
6. ALL REMOVED SPEAKERS SHALL BE RETURNED TO THE ENGINEER.
7. ALIGN CENTER LINES OF SPEAKERS (ON WHICH WORK IS TO BE DONE
IN THE CORRIDORS) TO THE CENTER LINE OF THE CORRIDOR. IN CASE
OF CONFLICT WITH EXISTING CEILING LIGHTING AND GRILLS, FINAL
LOCATION OF SPEAKERS SHALL BE ADJUSTED WITH THE APPROVAL
OF THE ENGINEER.
8. SINCE FIRE ALARM CIRCUIT LENGTH IS CRITICAL, ROUTING AND
INSTALLATION OF ALL FIRE ALARM CIRCUITS SHALL BE AS SHOWN
ON DRAWING.
9. COORDINATE REMOVAL OF ALL SPEAKERS WITH ENGINEER. DISCONNECT
AND ABANDON EXISTING SPEAKER CIRCUITS IN CEILING. TAPE ENDS OF
ABANDONED CONDUCTORS AND TAG AS ABANDONED. THIS WORK SHALL
BE DONE IN THE PRESENCE OF THE ENGINEER.
10. REPLACE EXISTING SPEAKER WITH THE SHOWN WATTAGE RATED SPEAKER,
AND REWIRE AS SHOWN. EXISTING BACKBOX CAN BE UTILIZED IF IT IS
SIMILAR TO THE TYPICAL SPEAKER BOX. SEE INSTALLATION DETAIL "A"
ON DWG. E-2.

SPEAKER CIRCUIT/LOADING TABLE

SPEAKER TAP/DB SETTING	Watts	1/8	1/4	1/2	1	2	4	TOTAL POWER (Watts)	CIRCUIT LENGTH (ft.)
SPK-A	75	78	81	84	87	90		4,625	686
SPK-B	6	5	7	1				6,500	735
SPK-C	6	0	4	3				5,750	620
SPK-D	4	1	5	4				7,250	614
GRAND TOTAL								24,125	2655



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SCALE IN FEET

